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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,775	07/20/2000	Norman F. Krasner	02344.P037X	3595

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QUALCOMM, INC
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EXAMINER

CHOW, CHARLES CHIANG

ART UNIT PAPER NUMBER

2618

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/619,775	Applicant(s) KRASNER, NORMAN F.	
	Examiner Charles Chow	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-47 is/are pending in the application.
- 4a) Of the above claim(s) 1-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Detailed Action

1. This office action is for amendment received on 3/6/2006.
2. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2618.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 44-45, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ando (US 5,036,329) in view of Kanai (US 5,239,667).

Regarding **claim 44**, Ando teaches a method of determining of a Doppler search window [method in Fig. 4, the Doppler search window, +/- 600 Hz, abstract]

for acquiring a satellite positioning system signal by a mobile communication device MCD [the recapturing, retracking, acquiring, a GPS satellite signal from a traveling GPS receiver in a vehicle, col. 4, lines 36-43; the narrow band search for satellite signals in col. 4, lines 43-54],

the determining the Doppler search window based on the information representing the approximate motion of the MCD [the successively changing of PLL search frequency range within Doppler frequency shift rang predicted from speed in col. col. 6, lines 4-9; the varying of the frequency search range window based on the estimated moving speed of a GPS receiver, such as +/- 600 Hz at speed of 60 m/sec, col. 1, lines 448-52].

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Ando fails to teach the following features, which taught by Kanai, the method of comprising receiving a cellular communication signal [the mobile station 10 detects the received signal strength when communication to land sites 14, 16, 18, col. 4, lines 57-68, in a cellular mobile system, col. 2, lines 63-68],

the determining a change in the received cellular communication signal resulting from motion of the MCD [the monitoring the signal change, Rayleigh fading of the received signal strength, for measuring the speed in col. 2, lines 53-62; the calculating of signal change, crossing rate, N_{LCR} , for speed V in equation 3],

the determining information representing the approximate motion of the MCD according to the determined change in the received cellular communication signal [the determination of speed V based on the Rayleigh fading, N_{LCR} , for speed V in equation 3 in col. 3, line 62 to col. 4, line 26], to accurately computer the speed of mobile station using equation 3.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to upgrade Ando with Kanai's accurate speed estimation based on received changing signal, Rayleigh fading, & frequency shift f_D in order to control the satellite search window accurately, based on the accurate speed of the mobile station.

Regarding **claim 45**, Kanai teaches the change in the received cellular communication signal resulting from motion of the MCD is represented by the fluctuation of received signal due to Rayleigh fading [the Rayleigh fading in signal strength due to speed of mobile station, col. 2, lines 53-62, the Rayleigh fading effects the instantaneous level of the received signal in col. 3, lines 2-68].

Regarding **claim 47**, Kanai teaches the change in the received cellular communication signal resulting from motion of the MCD is represented by the transmit power of the MCD [at the first land site, detecting a level crossing rate, is the number indicating the signal

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strength level, transmit power from MCD, crosses a given level, the change in received signal, col. 3, lines 23-26].

4. Claims 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ando in view of Kanai, as applied to claim 44 above, and further in view of Gilhousen (US 5,859,612).

Regarding **claim 46**, Kanai teaches the measuring of the speed of mobile station in equation 3. Ando and Kanai fail to teach the change in the received cellular communication signal resulting from position change, associated with the motion of the MCD, is represented by the power control commands that control the transmit power of the MCD.

Gilhousen teaches these features [the determining of the position of mobile station in col. 1, lines 8-15 & steps 130 & 190 of Fig. 1; the power control circuitry 438, having the command controlling bits from cell-site to adjust the transmit power of a mobile subscriber station in col. 27, line 66 to col. 28, line 12; the AGC power controlling in col.25, lines 31-40; col. 11, lines 5-14], to improve the method for controlling the transmit power, in order to determine the position of a mobile station [abstract, in Fig. 14, 16, in col. 1, line 8-15]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to upgrade Ando, Kanai, with Gilhousen's power controlling command for the determination of the position of a mobile station, in order to correct the communication link with proper power level due to position change of the mobile station.

Response to Argument

5. Applicant's arguments filed 3/06/2006 have been fully considered but they are not persuasive.

Regarding applicant's argument for the lack of the obtaining motion information from cited Ando, due to Ando fails to provide any motion information, the speed of the

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vehicle-mount GPS receiver, in order to support the motivation to combine with Kanai's motion information; and Kani does not teach the positioning, motion, information of a mobile device in order be motivated to combine with Ando; Gilhousing is not teaching the determining of the movement of a mobile station [pages 3-5 of applicant's amendment 3/06/2006];

Ando does teach the vehicle mounted GPS receiver moves at 60 m/sec. causes Doppler frequency shift of +/- 600Hz [col. 1, lines 48-52], for supporting the motivation to combine with Kanai's motion information.

Kanai does teach the motion information, the speed of mobile radio terminal is measured via Raleigh fading signal strength [abstract, col. 3, line 63 to col. 4, line 53, equation 3], for considering a handoff [col. 2, lines 53-62].

Kanai teaches a efficient method of measuring the speed of a vehicle by using the Raleigh fading signal strength above, and when the signal strength is weak, below a threshold, the communication link is worse. This supports Ando's vehicle-mount GPS receiver for losing satellite signal, due to frequency shift from the moving vehicle.

Regarding Gilhousen is not teaching the determining of the movement of a mobile station, Kanai teaches the measuring, determining, of the speed, the movement, of a mobile station in above, to combine with Gilhousen's power control command due to position changes from mobile station as shown in claim 46 above.

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of

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the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles C. Chow whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Chow *CC*,

April 3, 2006.


EDWARD F. URBAN
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